

ENT COOPERATION TREA

PCT

NOTIFICATION OF ELECTION
(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

| | |
|--|--|
| Date of mailing (day/month/year) 28 May 2001 (28.05.01) | |
| International application No. PCT/EP00/08748 | Applicant's or agent's file reference AT/K-22099/A/MA 2186 |
| International filing date (day/month/year) 07 September 2000 (07.09.00) | Priority date (day/month/year) 16 September 1999 (16.09.99) |
| Applicant HATTON, Kevin, Brian | |

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

13 February 2001 (13.02.01)

in a notice effecting later election filed with the International Bureau on:

2. The election was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

| | |
|---|---|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland | Authorized officer Nestor Santesso |
| Facsimile No.: (41-22) 740.14.35 | Telephone No.: (41-22) 338.83.38 |

?b 351

14mar02 14:08:01 User019525 Session D1190.1
Sub account: 272/068/CMD/RAO

File 351:Derwent WPI 1963-2001/UD,UM &UP=200217
(c) 2002 Derwent Info Ltd

*File 351: Please see HELP NEWS 351 for details about U.S. provisional applications.

| Set | Items | Description |
|-------------|--------|--------------|
| --- | ----- | |
| ?s pn=ep | 897710 | |
| S2 | 1 | PN=EP 897710 |
| ?t s2/7/all | | |

2/7/1
DIALOG(R) File 351:Derwent WPI
(c) 2002 Derwent Info Ltd. All rts. reserv.

012328344

WPI Acc No: 1999-134451/ 199912

Cationically photocurable epoxide resin composition useful for bonding, casting and coating and in dentistry - contains aromatic amine. diaryl-iodonium compound and alpha-dicarbonyl compound, has with little intrinsic colour, cures with little odour and gives strong cured product containing little extractable matter

Patent Assignee: ESPE DENTAL AG (ESPE-N)

Inventor: ECKHARDT G; WEINMANN W

Number of Countries: 030 Number of Patents: 007

Patent Family:

| Patent No | Kind | Date | Applicat No | Kind | Date | Week | |
|-------------|------|----------|-------------|------|----------|--------|---|
| EP 897710 | A2 | 19990224 | EP 98115822 | A | 19980821 | 199912 | B |
| DE 19736471 | A1 | 19990225 | DE 1036471 | A | 19970821 | 199914 | |
| AU 9880838 | A | 19990304 | AU 9880838 | A | 19980819 | 199921 | |
| CN 1209313 | A | 19990303 | CN 98117487 | A | 19980820 | 199928 | |
| JP 11130945 | A | 19990518 | JP 98247776 | A | 19980817 | 199930 | |
| CA 2245548 | A | 19990221 | CA 2245548 | A | 19980821 | 199932 | |
| US 6084004 | A | 20000704 | US 98138281 | A | 19980821 | 200036 | |

Priority Applications (No Type Date): DE 1036471 A 19970821

Patent Details:

| Patent No | Kind | Lan | Pg | Main IPC | Filing Notes |
|-----------|------|-----|----|----------|--------------|
|-----------|------|-----|----|----------|--------------|

| | | | | | |
|-----------|----|---|----|--------------|--|
| EP 897710 | A2 | G | 11 | A61K-006/087 | |
|-----------|----|---|----|--------------|--|

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI

| | | |
|-------------|----|-------------|
| DE 19736471 | A1 | C08L-063/00 |
|-------------|----|-------------|

| | | |
|------------|---|-------------|
| AU 9880838 | A | C08L-063/00 |
|------------|---|-------------|

| | | |
|------------|---|-------------|
| CN 1209313 | A | A61K-006/02 |
|------------|---|-------------|

| | | |
|-------------|---|----------------|
| JP 11130945 | A | 10 C08L-063/00 |
|-------------|---|----------------|

| | | |
|------------|---|-------------|
| CA 2245548 | A | C08G-059/68 |
|------------|---|-------------|

| | | |
|------------|---|-------------|
| US 6084004 | A | C08F-002/46 |
|------------|---|-------------|

Abstract (Basic): EP 897710 A

A cationically photocurable composition contains 0.001-5 wt.%

aromatic amine(s) (I) in addition to (a) 0.01-8 wt.% diaryliodonium compound(s) (II), (b) 0.01-8 wt.% alpha -dicarbonyl compound(s) (III), (c) 10.0-99.9 wt.% compound(s) (IV) containing epoxide and/or oxetane groups and (d) 0-85 wt.% modifier, e.g. filler, dye, pigment, flow enhancer, thixotropic agent, polymeric thickener, oxidant, stabilizer and retarder.

USE - The compositions are used for bonding, casting and coating substrates; and in dental compositions, especially for the production of filling, bonding, blending and sealing materials, filling and fixing cements, provisional dentures, prostheses and plastics for making total or partial prostheses (all claimed).

ADVANTAGE - The compositions have little intrinsic colour, cure with little odour and give cured products with very good mechanical properties, e.g. high cohesion, compression strength and flexural strength and little extractable matter.

Dwg. 0/0

Derwent Class: A21; A96; D21; E19; G02; G03; P34

International Patent Class (Main): A61K-006/02; A61K-006/087; C08F-002/46;
C08G-059/68; C08L-063/00

International Patent Class (Additional): A61L-027/00; C08G-065/10;
C08G-065/18; C08K-005/07; C08K-005/17; C08K-005/18; C08L-071/00;
C08L-071/02; C09D-163/00; C09J-163/00; C09K-003/10

PENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|--|---|---|
| Applicant's or agent's file reference AT/K-22099/A/MA 2186 | FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. | |
| International application No. PCT/EP 00/ 08748 | International filing date (<i>day/month/year</i>) 07/09/2000 | (Earliest) Priority Date (<i>day/month/year</i>) 16/09/1999 |
| Applicant VANTICO AG ET AL. | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
- 2. Certain claims were found unsearchable (See Box I).
- 3. Unity of invention is lacking (see Box II).

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

 None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/08748

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C08G65/18 C08G59/24 C08G59/62

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 C08G G03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| E | WO 00 63272 A (JSR CORP ;KATO YUKITOSHI (JP); TANABE TOYOKAZU (JP); UKACHI TAKASHI) 26 October 2000 (2000-10-26) claims; examples | 1-6 |
| X | EP 0 848 292 A (JAPAN SYNTHETIC RUBBER CO LTD ;JAPAN FINE COATINGS CO LTD (JP); DS) 17 June 1998 (1998-06-17) page 8, line 41 -page 9, line 3; claims | 1-6 |
| X | EP 0 897 710 A (ESPE DENTAL AG) 24 February 1999 (1999-02-24) claims; example 8; table 1 | 1-6 |
| X | US 5 721 020 A (FUKUDOME KAZUMI ET AL) 24 February 1998 (1998-02-24) column 11, line 17 - line 67; claims; examples | 1-6 |
| | --- | -/- |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

17 November 2000

06/12/2000

Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Deraedt, G

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 00/08748

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| X | US 5 674 922 A (IGARASHI ICHIRO ET AL) 7 October 1997 (1997-10-07) claims; examples 2,3 --- | 1-6 |
| A | PATENT ABSTRACTS OF JAPAN vol. 1999, no. 11, 30 September 1999 (1999-09-30) & JP 11 152441 A (KANSAI PAINT CO LTD), 8 June 1999 (1999-06-08) abstract --- | 1 |
| A | PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12, 29 October 1999 (1999-10-29) & JP 11 181391 A (NIPPON KAYAKU CO LTD), 6 July 1999 (1999-07-06) abstract ----- | 1 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 00/08748

| Patent document cited in search report | Publication date | Patent family member(s) | | | Publication date |
|--|------------------|-------------------------|------------|---------------|------------------|
| WO 0063272 | A 26-10-2000 | NONE | | | |
| EP 0848292 | A 17-06-1998 | JP 10168106 A | 23-06-1998 | DE 69702490 D | 17-08-2000 |
| | | US 6096796 A | 01-08-2000 | | |
| EP 0897710 | A 24-02-1999 | DE 19736471 A | 25-02-1999 | AU 8083898 A | 04-03-1999 |
| | | CA 2245548 A | 21-02-1999 | CN 1209313 A | 03-03-1999 |
| | | JP 11130945 A | 18-05-1999 | US 6084004 A | 04-07-2000 |
| US 5721020 | A 24-02-1998 | GB 2305919 A, B | 23-04-1997 | JP 9309950 A | 02-12-1997 |
| US 5674922 | A 07-10-1997 | JP 9031186 A | 04-02-1997 | | |
| JP 11152441 | A 08-06-1999 | NONE | | | |
| JP 11181391 | A 06-07-1999 | NONE | | | |

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|---|--|---|
| Applicant's or agent's file reference AT/K-22099/A/MA 2186 | FOR FURTHER ACTION | See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) |
| International application No. PCT/EP00/08748 | International filing date (day/month/year) 07/09/2000 | Priority date (day/month/year) 16/09/1999 |
| International Patent Classification (IPC) or national classification and IPC C08G65/18 | | |
| Applicant VANTICO AG ET AL. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

| | |
|--|--|
| Date of submission of the demand 13/02/2001 | Date of completion of this report 30.11.2001 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized officer Von Kuzenko, M Telephone No. +49 89 2399 8605 |



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/08748

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):
Description, pages:

1-19 as originally filed

Claims, No.:

1-6 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
 - the language of publication of the international application (under Rule 48.3(b)).
 - the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
 - the claims, Nos.:
 - the drawings, sheets:
5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/08748

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N) Yes: Claims 1-19
No: Claims

Inventive step (IS) Yes: Claims 1-19
No: Claims

Industrial applicability (IA) Yes: Claims 1-19
No: Claims

2. Citations and explanations
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/08748

cf V

- D1: WO 00 63272 A (JSR CORP ;KATO YUKITOSHI (JP); TANABE TOYOKAZU (JP); UKACHI TAKASHI) 26 October 2000 (2000-10-26)
- D2: EP-A-0 848 292 (JAPAN SYNTHETIC RUBBER CO LTD ;JAPAN FINE COATINGS CO LTD (JP); DS) 17 June 1998 (1998-06-17)
- D3: EP-A-0 897 710 (ESPE DENTAL AG) 24 February 1999 (1999-02-24)
- D4: US-A-5 721 020 (FUKUDOME KAZUMI ET AL) 24 February 1998 (1998-02-24)
- D5: US-A-5 674 922 (IGARASHI ICHIRO ET AL) 7 October 1997 (1997-10-07)
- D6: PATENT ABSTRACTS OF JAPAN vol. 1999, no. 11, 30 September 1999 (1999-09-30) & JP 11 152441 A (KANSAI PAINT CO LTD), 8 June 1999 (1999-06-08)
- D7: PATENT ABSTRACTS OF JAPAN vol. 1999, no. 12, 29 October 1999 (1999-10-29) & JP 11 181391 A (NIPPON KAYAKU CO LTD), 6 July 1999 (1999-07-06)

1. D1 will only be considered in the EURO-Phase of this application.
2. None of the cited documents discloses explicitly a composition comprising all components (a) to (d) of present claim 1 on file.

D2 is the only document which at least mentions the components (a) to (d) in the description.

However component (a), the oxetane compound, is only mentioned in the context that "various other components may be incorporated into the photo-curable resin composition (typical examples are epoxy compounds, oxetane compounds, oxolane compounds cyclic acetal compounds, cyclic lactone compounds and the like)". Hence D2 does not explicitly disclose all components (a) to (d).

Therefore the subject-matter of claim 1 on file meets the requirements of Art. 33(2) PCT.

3. There is no hint in D2 that would encourage the skilled person to incorporate oxetane compounds into the composition disclosed in claims 1 to 9 of D2.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/08748

The other documents D2 to D6 disclose compositions comprising oxetane compounds, however these documents do not teach the use of polyhydroxy compounds in the relevant compositions.

D7 teaches that either epoxy compounds or oxetane compounds should be used in the compositions.

Therefore the subject-matter of claim 1 is not derivable from the prior art teachings, taken alone or in combination.

Art. 33(3) PCT.